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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,841	01/03/2001	Michael Gerhard	(Z) 98027 P US	7441

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EXAMINER

FERNANDEZ, KALIMAH

ART UNIT PAPER NUMBER

2881

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/754,841

Applicant(s)

GERHARD ET AL.

Examiner

Kalimah Fernandez

Art Unit

2881

AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/17/03
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 6 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The use of inhomogeneous magnetic or electric fields for producing a fluid cross-flow is not sufficient to enable a person having ordinary skill in the art to make and/or use the invention.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1,3-5,7,9-12,14,17-18, and 21-23 are rejected under 35

U.S.C. 102(e) as being anticipated by US Pat No 6,268,904 issued to Mori et al.

3. Mori et al disclose a process for decontamination of microlithographic projection exposure devices with UV light and fluid (col.20, line 36-col.21, line 15).

4. Mori et al disclose the microlithographic projection exposure device having cleanable optical elements (col.7, lines 17-39).

5. Mori et al disclose a first UV light source (10) for projection exposure and a second UV light source for decontamination of optical elements (col.28, lines 33-37).

6. Mori et al disclose conducting the decontamination process between exposures (col.7, lines 17-59; fig. 26).

7. As per claims 3,12 and 14, Mori et al disclose producing a flow of fluid directed parallel to the surfaces of optical elements to be cleaned (see fig. 14; col.20, line 67- col.21, line 15; col.13, lines 25-44).

8. As per claims 4-5, Mori et al disclose branching off the fluid from a normal operation flushing gas supply (col.13, lines 35-44; see fig. 14).
9. As per claim 7, Mori et al disclose employing fluids with different densities alternately for flushing (col.17, lines 20-30).
10. As per claims 9-10 and 18, Mori et al disclose ozonic or oxygen gas (col.17, lines 20-26).
11. As per claim 11, Mori et al disclose a first DUV excimer laser (col.7, lines 25-32) and second UV light source (col.28, lines 33-36) for decontamination of optical elements that is switched in alternatively in intervals between exposures (col.7, lines 17-59; fig. 26).
12. As per claim 17, Mori et al disclose control device for increasing gas flow for the flushing operation (col. 16, line 67- col.17, line 14).
13. As per claims 21-23, Mori et al disclose intermediate photo-cleaning intervals (col.7, lines 17-59; fig. 26) for cleaning the surfaces of optical elements (e.g. lenses) (e.g., col.7, lines 17-21; col.18, lines 56-64).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al ('904) and in view of US Pat No 6,549,551 issued to Ness et al.

16. Mori et al disclose the use of an ArF excimer laser (col.5, lines 52-53). Mori et al does not explicitly teach the bandwidth of the light source.

17. However, Ness et al teach the natural bandwidth of an ArF excimer lasers is about 500nm (col.3, lines 14-16).

18. It would have been obvious to artisan of ordinary skill to incorporate the teaching of Ness et al into Mori et al since Ness et al teach the ease of operation (col.1, lines 21-56).

19. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al and in view of US Pat No 6,571,057 issued to Aoki.

20. Mori et al teach the claimed invention, but does not explicitly teach the flushing openings being radially arranged about the optical axis.

21. However, Aoki is relied upon to illustrate the desirability of the flushing openings being radially arranged about the optical axis (see fig. 4b; col.13, lines 47-55).

22. It would have been obvious to an artisan of ordinary skill at the time this invention was made to incorporate the teachings of Aoki into Mori et al since Aoki teaches improved contaminant removal (col.13, lines 47-55).

23. Claims 8,15, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al and in view of US Pat No 5,821,175 issued to Engelsberg.

24. Mori et al teach the claimed invention except for a turbulent flow, mechanical vanes, and light guide.

25. However, Engelsberg teaches the generation of a turbulent flow as in claim 8 and a light guide as in claim 20 (see col. 21, line 60- col.22, line 35).

26. It would have been obvious to a person having ordinary skill in the art to combine Engelsberg and Mori et al since Engelsberg teaches versatility would improved productivity (see col. 22, lines 7-35).

27. As per claim 15, Engelsberg teaches mechanical vanes (col.18, lines 50-56).

28. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al and in view of US Pat No. 5,879,159 issued to Cipolla.

29. Mori et al teach the claimed invention except for a light guide with a reflector.

30. However, Cipolla teaches a light source having a light guide and an elliptical reflector (see col.4, lines 35-55).

31. It would have been obvious to an artisan having ordinary skill at the time this invention was made to incorporate the teachings of Cipolla into Mori et al since Cipolla teaches high power lamp for reducing the required exposure time (col.4, lines 44-46).

Response to Arguments

32. Applicant's arguments, see Remarks, filed November 17, 2003, with respect to the rejection(s) of claim(s) 1-20 under Kawata have been fully considered and are persuasive. Therefore, the rejection has been

withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Mori et al '904.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kalimah Fernandez whose telephone number is 571-272-2420. The examiner can normally be reached on Mon-Tues 6:30-3:30; Wed-Thurs 8-5 and Fri. 9am-6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571-272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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